

**REMARKS****Claim Disposition**

Claims 1, 2, 9, 10, 13 - 22, 44, 47 - 51, 58, 59, 62 - 71, 93, 96 - 100, 104 - 113, 116, 119 - 123, and 128 - 137 are pending in the application. Claims 1, 2, 15 - 18, 49 - 51, 59, 64 - 67, 93, 96 - 100, 106 - 109, 121 - 123, and 130 - 133 have been amended. Claims 3 - 8, 11, 12, 23 - 43, 45, 46, 52 - 57, 60, 61, 72 - 92, 94, 95, 101 - 103, 114, 115, 117, 118, and 124 - 127 have been cancelled.

**Claim Rejections -35 USC §112**

Claims 1, 50, 99, and 122, stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to enable. The Examiner states that the virtual being substantially independent of the coordinate system is not discussed in the application. Claims 1, 50, 99, and 122 as amended no longer recite this limitation. These claims as amended recite "creating a master process model including a virtual blank generated from a referenced set of geometries, said master process model lacking an associative relationship with a coordinate system, said virtual blank corresponding to said real-world blank". Support for the lack of an associative relationship with a coordinate system is found generally at page 19, lines 6 - 21, and elsewhere in the specification. In view of the foregoing, applicants respectfully submit that claims 1, 50, 99, and 122, as amended, fully comply with 35 U.S.C. §112, first paragraph. Therefore, reconsideration and allowance of these claims are requested.

Claims 1 - 137 stand rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite in the usage of the term substantially. The remaining claims in the present application have been amended to no longer recite this term. Claims 1, 2, 9, 10, 13 - 22, 44, 47 - 51, 58, 59, 62 - 71, 93, 96 - 100, 104 - 113, 116, 119 - 123, and 128 - 137 are pending in the application and are believed to fully comply with 35 U.S.C. §112, second paragraph. Therefore, reconsideration and allowance of these claims are requested.

**Claim Rejections -35 USC §101**

Claims 122-137 stand rejected under 35 U.S.C. §101 as allegedly not being directed to statutory subject matter. Claim 122 has been amended to recite that the signal is tangibly embodied in a medium. More specifically, claim 122 recites "[a] computer data signal propagated over a transmission medium for communication with a computer, said signal including code configured to cause a computer to implement a method for horizontally structured CAD/CAM manufacturing"

**Claim Rejections 35 U.S.C. §102**

Claims 1 - 137 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Khurana. Claims 3 - 8, 11, 12, 23 - 43, 45, 46, 52 - 57, 60, 61, 72 - 92, 94, 95, 101 - 103, 114, 115, 117, 118, and 124 - 127 have been cancelled.

The Examiner states that "creating a master process model (Col. 7; Col. 8, line 52) comprising: a virtual blank corresponding to said blank, wherein said virtual blank is substantially independent of said coordinate system (Col. 1, lines 22-33; Col. 2, lines 32-35; Col. 2, lines 43-47; Col. 8, lines 31-41" is disclosed by Khurana

The independent claims 1, 50, 99, and 122, each recite "creating a master process model including a virtual blank generated from a referenced set of geometries, *said master process model lacking an associative relationship with a coordinate system*, said virtual blank corresponding to said real-world blank", emphasis added. Referring to Col. 1, lines 22-33; Col. 2, lines 32-35; Col. 2, lines 43-47; Col. 8, lines 31-41 of Khurana, cited by the Examiner, does not teach nor suggest "creating a master process model including a virtual blank generated from a referenced set of geometries, *said master process model lacking an associative relationship with a coordinate system*, said virtual blank corresponding to said real-world blank". Khurana teaches a "base feature" which corresponds to a real-world blank. The recited virtual blank also corresponds to a real-world blank. Further, both the base feature of Khurana and the virtual blank of the present invention are included in their respective master process models. The base feature of Khurana has a direct relationship with the coordinate system; see Columns 3 and 4, particularly Col. 4, lines 21 - 23. Accordingly, since the base feature of Khurana is included with the master process model of Khurana, it would also, by association, have a relationship with the

coordinate system. In distinct contrast to the present invention, the "*master process model [is] lacking an associative relationship with a coordinate system*". In view of this, applicants respectfully submit that independent claims 1, 50, 99, and 122 are not anticipated by Khurana.

Dependent claims 2, 9, 10, 13 - 22, 44, 47 - 49, 51, 58, 59, 62 - 71, 93, 96 - 98, 100, 104 - 113, 116, 119 - 121, 123, and 128 - 137 are also not anticipated by Khurana, as depending from what should now be allowable independent claims.

Accordingly, reconsideration and allowance of claims 1, 2, 9, 10, 13 - 22, 44, 47 - 51, 58, 59, 62 - 71, 93, 96 - 100, 104 - 113, 116, 119 - 123, and 128 - 137 are requested.

**Claim Rejections - 35 USC § 103**

Claims 1-137 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,629,065 to Gadhi, hereinafter referred to as Gadhi in view of U.S. Patent No. 4,928,221 to Belkhir, hereinafter referred to as Belkhir. The Examiner states that Gadhi discloses creating a master product and process concurrent model (Col. 10, lines 22-58) comprising: a virtual blank corresponding to said blank, wherein said virtual blank is substantially independent of said coordinate system (Fig. 55A, element b1); a manufacturing feature (Fig. 55A, any of elements nw or nb), virtual machining of said manufacturing feature into said virtual blank (See Fig. 55A and Col. 36, lines 28-39), said manufacturing feature exhibiting an associative relationship with said coordinate system (See Fig. 25A-25D; Col. 24, lines 6-32).

The independent claims 1, 50, 99, and 122 each recite (1) "creating a master process model including a virtual blank generated from a referenced set of geometries, *said master process model lacking an associative relationship with a coordinate system*, said virtual blank corresponding to said real-world blank" and (2) "virtual machining at least one manufacturing feature into said virtual blank, *each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system*", emphasis added.

In Gadhi there is simply no disclosure that a master product and process concurrent model (Col. 10, lines 22-58) is lacking an associative relationship with a coordinate system. In fact, referring to Figure 55A of Gadhi cited by the Examiner the block b<sub>1</sub> (referred to by the examiner as the virtual blank of the present claims) clearly associated

with a grid or coordinate system. Since the block  $b_1$  of Gadh is included with the master product and process concurrent model of Gadh, it would also, by association, have a relationship with the coordinate system. In distinct contrast to the present invention, the ***"master process model [is] lacking an associative relationship with a coordinate system"***. In view of this, Gadh fails to disclose a ***"master process model [is] lacking an associative relationship with a coordinate system"***, as recited by the independent claims. Further, Belkhiter also does not disclose a ***"master process model [is] lacking an associative relationship with a coordinate system"*** (moreover, such was not suggested by the Examiner).

Also, the elements nw or nb (referred to by the examiner as the manufacturing features of the present claims) in Gadh are only shown to be associated with block  $b_1$ . However, the present claims recite ***"each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system"***. These elements (nw or nb) are clearly not disclosed as having an associative relationship with the coordinate system shown. This is further supported by the fact that Gadh specifically teaches a modeling approach that is essentially the "vertical" modeling of the existing art, see generally col. 9, lines 5 – 32 of Gadh. In view of this, Gadh fails to disclose a ***"each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system"***, as recited by the independent claims. Further, Belkhiter also does not disclose a ***"each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system"*** (moreover, such was not suggested by the Examiner).

In view of this, applicants respectfully submit that independent claims 1, 50, 99, and 122 patentably define over Gadh in view of Belkhiter.

Dependent claims 2, 9, 10, 13 – 22, 44, 47 – 49, 51, 58, 59, 62 – 71, 93, 96 – 98, 100, 104 – 113, 116, 119 – 121, 123, and 128 – 137 are also patentably define over Gadh in view of Belkhiter, as depending from what should now be allowable independent claims.

Accordingly, reconsideration and allowance of claims 1, 2, 9, 10, 13 – 22, 44, 47 – 51, 58, 59, 62 – 71, 93, 96 – 100, 104 – 113, 116, 119 – 123, and 128 – 137 are requested.

#### Double Patenting

Claims 1-137 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-78 of U.S. Patent

No. 6,775,581 to Landers. Claims 1-137 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-42 of U.S. Patent No. 6,754,556 to Landers. Claims 1-137 stand as provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-88 of copending Application No. 10/032959 to Landers.

Terminal disclaimers are filed herewith rendering these rejections moot. Accordingly, reconsideration and allowance of claims 1, 2, 9, 10, 13 - 22, 44, 47 - 51, 58, 59, 62 - 71, 93, 96 - 100, 104 - 113, 116, 119 - 123, and 128 - 137 are requested

Accordingly, as the cited references in the Office Action neither anticipate nor render obvious that which the applicant deems to be the invention, it is respectfully requested that claims 1, 2, 9, 10, 13 - 22, 44, 47 - 51, 58, 59, 62 - 71, 93, 96 - 100, 104 - 113, 116, 119 - 123, and 128 - 137 be passed to issue.

It is believed that the foregoing remarks fully comply with the Office Action.

If there are additional charges with respect to this matter or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully Submitted,

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